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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	5,821.342	54.145	177.529	124.662	0.000	124.662	67.702	29.381	0.383	0.000	Continuing	Continuing
651120: <i>Pegasus Capability Improvements</i>	3.105	24.206	55.610	54.860	0.000	54.860	45.056	25.643	0.383	0.000	Continuing	Continuing
655271: <i>KC-46 RDT&E</i>	5,818.237	29.939	121.919	69.802	0.000	69.802	22.646	3.738	0.000	0.000	0.000	6,066.281

Program MDAP/MAIS Code: 387

Note
 In FY 2021, Program Element (PE) 0605221F KC-46A, Project 655271 KC-46 RDT&E, and Project 651120 Pegasus Capability Improvements efforts were transferred to PE 401221F, Project 655271 KC-46A RDT&E, and Project 651120 Pegasus Capability Improvements in order to consolidate all KC-46A activity under a single PE. PE 0401221F also has historical Tanker Replacement costs from FY 2005-2008 reflected in prior years. PE 0605221F has costs from FY 2009 to FY 2020.

In FY2023, PE 0401221F, KC-46A Tanker Squadrons, Project 655KCY, was transferred to a new PE 0605164F, Air Refueling Capability Modernization (ARCM), Project 645164, Continued Tanker Recapitalization RDT&E due to congressional request.

A. Mission Description and Budget Item Justification
 Replacement of the legacy tanker fleet will take place in several stages. The initial tanker replacement increment of KC-46As will replace roughly a third of the current capability. Future programs will ultimately recapitalize the entire tanker fleet over a period of more than 30 years. The Air Force completed an Analysis of Alternatives (AoA) in Apr 2006 to determine the most appropriate strategy to recapitalize the aging fleet of aerial refueling aircraft. Based on this analysis, the Air Force concluded a strategy of full and open competition to select a commercial derivative replacement tanker aircraft would result in a best value tanker contract. To initiate the first phase of the tanker replacement, the KC-46A program released a final Request for Proposal (RFP) on 24 Feb 2010, and entered source selection on 9 Jul 2010. The KC-46A program held a Milestone B (MS B) Defense Acquisition Board (DAB) on 23 Feb 2011, received approval to enter Engineering and Manufacturing Development (EMD) from the Undersecretary of Defense (Acquisition, Technology and Logistics) (USD(AT&L)) on 24 Feb 2011, and awarded the KC-46A EMD contract to Boeing on 24 Feb 2011 to develop and procure 179 KC-46A aircraft. The program is procuring four RDT&E aircraft for integration and demonstration of capability which will ultimately be operationally fielded. During production, the program plans to procure 175 aircraft throughout 13 lots. The KC-46A program held a MS C DAB on 12 Aug 2016 and received approval to enter Low Rate Initial Production (LRIP). The program awarded LRIP Lots 1 and 2 on 18 Aug 2016, LRIP Lot 3 on 27 Jan 2017, LRIP Lot 4 on 10 Sep 2018, and LRIP Lot 5 on 27 Sep 2019. Lot 6 awarded on 12 Jan 2021, Lot 7 awarded on 20 Jan 2021, Lot 8 awarded 31 Aug 2022, and Lot 9 awarded 27 Jan 2023, bringing the total number of aircraft on production contract to 124. Initial sustainment effort is provided via Interim Contractor Support (ICS) as the program is transitioning to organic sustainment. KC-46A funding also supports Training Systems, Support Equipment, Operational Site Activation, Depot Stand-Up, Alternate Mission Equipment (AME), Direct Mission Support, Program Support Costs (PSC) activities, Other Government Costs (OGC), various studies and analyses, future tanker planning activities, long lead items, and potential Diminishing Manufacturing Sources (DMS) and obsolescence planning activities.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	
<p>The KC-46A will provide the capability to fuel joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger, and aeromedical evacuation capabilities. The KC-46A will operate in day, night, and adverse weather conditions to enable deployment, employment, sustainment, and redeployment of U.S. joint, allied, and coalition forces. The KC-46A will have communication, navigation, and surveillance equipment for world-wide operations; the capability to perform missions in chemical and biological environments; the ability to operate in up to medium threat environments with self-defense/ protection (both active and passive) capabilities; and the necessary battle space awareness to mitigate survivability threats. The first DD250 was signed on 10 Jan 2019. The Air Force delivered the first KC-46A to McConnell Air Force Base on 25 Jan 2019. As of 1 Mar 2023, 68 aircraft have been delivered to the Air Force via DD250.</p> <p>The Aircrew Training System (ATS) and Maintenance Training System (MTS) are being procured using KC-46A funding. The ATS contract was awarded on 1 May 2013 to Flight Safety Services Corporation, now known as Flight Safety International - Defense. The ATS contract will provide Aircrew Training Devices (ATDs), to include Weapon System Trainers (WSTs), Boom Operator Trainers (BOTs), Fuselage Trainers (FuTs), Part-Task Trainers (PTTs), and emerging technologies to meet validated Air Mobility Command (AMC) aircrew training requirements at each Main Operating Base (MOB) and the Formal Training Unit (FTU). The ATS contract will also support Distributed Mission Operations (DMO), provide aircrew instruction, develop courseware, provide logistics support, acquire a technical data package to support future competition efforts, and manage training device/courseware concurrency with the aircraft. The first eight ATS production options were exercised on 19 Aug 2015, 31 May 2017, 30 Apr 2018, 31 Mar 2019, 27 Feb 2020, 4 Mar 2021, 24 Feb 2022, and 15 Nov 2022.</p> <p>The MTS contract was awarded 6 Jul 2016 to The Boeing Company. The MTS acquisition focuses on designing, developing, testing, producing, and fielding an optimized training system for KC-46A maintainers by integrating various forms of training media and Maintenance Training Devices (MTDs) into a "blended" solution. This blended solution includes the appropriate mix of hardware and software, "high-fidelity" Augmented Hardware Training Devices (AHTDs), Part Task Trainers (PTTs), Interactive Multimedia Instruction (IMI), and emerging technologies to meet validated AMC maintenance training requirements.</p> <p>This requirement supports performance of a full financial audit as required by U.S.C. Title 10, Subtitle A, Part I, Chapter 9A, Sec 240-D, Financial Improvement and Audit Remediation (FIAR) Plan.</p> <p>This program element may include necessary civilian pay expenses required to manage, execute, and deliver KC-46A weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, and 0606398F. In FY 2022 \$2.173 million was expended for civilian pay expenses in this program element, and in FY 2023 \$2.217 million is forecast for civilian pay expenses in this program element.</p> <p>This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force	Date: March 2023
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>
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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	66.758	197.510	73.709	0.000	73.709
Current President's Budget	54.145	177.529	124.662	0.000	124.662
Total Adjustments	-12.613	-19.981	50.953	0.000	50.953
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-8.700			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	-11.281			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.613	0.000			
• Other Adjustments	-11.000	0.000	50.953	0.000	50.953

Change Summary Explanation

In FY 2022, the Air Force provided \$1.613 million to help fund Small Business Innovative Research (SBIR) and authorized transfer of \$11.00 million to fulfill invoice of FY 2015 obligated funds (now cancelled).

FY2023 Appropriations Conference reduced KC-46A Pegasus Advanced Communications Suite (PACS) by \$8.700 million for "PACS delays" and \$11.281 million for Congressional Directed Transfer to a new PE 0605164F, Air Refueling Capability Modernization (ARCM), Project 645164, Continued Tanker Recapitalization RDT&E.

FY 2024 Base Value from previous FY2023 PB consisted of \$54.404 million for KC-46A and \$19.305 million for ARCM. The \$19.305 million was later removed and transferred into a new new PE 0605164F, Air Refueling Capability Modernization (ARCM), Project 645164, Continued Tanker Recapitalization RDT&E. Currently, all of the \$124.662 million requested in the FY 2024 PB is for KC-46A, resulting in an actual FY 2024 adjustment of \$70.258 million for the KC-46A program between FY 2023 PB and FY 2024 PB (difference between \$54.404 million and 124.662 million). The FY 2024 President's Budget increase is to support continuation and expansion of KC-46A Block I Pegasus Advanced Communications Suite (PACS) EMD activities, studies and analyses, Air Refueling Airplane Simulator Qualification (ARASQ) data collection and modeling, Take Off and Landing Data (TOLD) program development.

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 651120 / Pegasus Capability Improvements
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
651120: <i>Pegasus Capability Improvements</i>	3.105	24.206	55.610	54.860	0.000	54.860	45.056	25.643	0.383	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The KC-46A will provide the capability to fuel joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger, and aeromedical evacuation capabilities. The KC-46A will operate in day/night and adverse weather conditions to enable deployment, employment, sustainment, and redeployment of U.S. joint, allied, and coalition forces. The KC-46A will have communication, navigation, and surveillance equipment for worldwide operations; the capability to perform missions in chemical and biological environments; the ability to operate in up to medium threat environments with self-defense/protection (both active and passive) capabilities; and the necessary battlespace awareness to mitigate survivability threats.

The dynamics and mission urgency of the post-production (post-DD-250) environment require the program to maintain a flexible and responsive posture to support a broad range of mission support needs. The KC-46A will continue to identify, design, develop, integrate, verify, certify, produce, install, field, and sustain a comprehensive range of non-recurring and recurring post-production, air vehicle enhancements and field support needs. These needs may originate from programmed Mobility Air Force (MAF) requirements, Combatant Commander Joint or Urgent Operational Needs (JUON/UON), non-programmed Federal Aviation Administration (FAA) directives, requirements identified and supported by HHQ Enterprise Capability Collaboration Teams (i.e., High Value Airborne Asset [HVAA], Air Superiority 2030, and Multi-Domain Command and Control [MDC2]), or correction of field deficiencies.

The KC-46A will continue to develop, field, and sustain warfighter capabilities to meet evolving threats and mission support requirements through Block or discrete modification or modernization programs depending on mission urgency, available funding, and programmatic and technical risks. Post-production requirements can include, but will not be limited to avionics and structural systems/ architecture and subsystem updates, general mission equipment updates and procurement, general sustainment support, studies and analyses, future Tanker requirements simulation and training, and correction of field deficiencies.

Project 651120 funding will also support Program Support Costs (PSC) activities, test support, mission planning capability development and various studies and analyses.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver KC-46A Pegasus Capability Improvements weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, and 0606398F. In FY 2022 \$2.173 million was expended for civilian pay expenses in this program element, and in FY 2023 \$2.217 million is forecast for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
Title: KC-46A Block 1 Pegasus Advanced Communications Suite (PACS)	12.033	53.326	30.257

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 651120 / Pegasus Capability Improvements

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Description: The KC-46A Block 1 Pegasus Advanced Communications Suite (PACS) program will satisfy Department of Defense (DoD), National Security Agency (NSA), Department of Transportation (DoT), and USAF mandates by upgrading legacy Tactical Data Link 16, Beyond Line-of-Sight (BLOS) Ultra High Frequency (UHF) Line-of-Sight (LOS) capabilities with next-generation Link 16 terminals and UHF secure, global, BLOS and anti-jam LOS satellite voice communications capabilities for the KC-46A weapon system. PACS enables compatibility and interoperability with current and planned future joint and allied forces while simultaneously increasing the survivability of secure global voice and data communications capabilities between Mobility Air Force (MAF) C2 agencies and MAF aircraft operating worldwide in or near contested environments.</p> <p>FY 2023 Plans: Award Contract for Block 1 PACS EMD program, begin development and follow-on associated contracting efforts.</p> <p>FY 2024 Plans: Continuation of Block 1 PACS EMD program and associated contracting efforts.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased due to reduced developmental program activities.</p>			
<p>Title: Support</p> <p>Description: Studies and analyses to support planning activities for future initiatives for upgrades, future tanker efforts, test support, test execution and other Program Support Costs.</p> <p>FY 2023 Plans: Continued Program Office Support to include studies, analyses and planning.</p> <p>FY 2024 Plans: Initiate testing and test support, modernization programs, studies, analyses and planning activities to support future upgrade initiatives.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Funding increased due to the ramp up of support and upgrade activities, to include but not limited to test and test support.</p>	12.173	2.284	24.603
Accomplishments/Planned Programs Subtotals	24.206	55.610	54.860

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
• APAF 05 41221F/ KC046A: KC-46A Tanker	1.984	0.467	0.000	-	0.000	-	59.067	70.862	72.233	0.000	204.613

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
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Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	Project (Number/Name) 651120 / <i>Pegasus Capability Improvements</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

The KC-46A Post-Production Change Management (PPCM) construct is comprised of processes and tools, specifically tailored to a broad spectrum of post-production requirements to support the KC-46A enterprise (e.g. weapon system, sustainability, training devices). PPCM is designed to leverage competition when applicable and emphasize configuration management and discrete cost accounting methodologies. KC-46A PPCM oversight will promote competition throughout the life cycle of the KC-46A fleet. All KC-46A post-production requirements and associated acquisition strategies will be carefully managed, reviewed, and approved at the appropriate levels by the KC-46A Division and/or Tanker Directorate senior functional leaders. PPCM requirements will employ multiple contract-types, tailored to the requirement and documented in discrete Acquisition Strategy Panel briefings, to minimize cost, technical, and schedule execution risks and ensure on-time deliverables. In addition, all ACAT-level programs, deriving from the PPCM process, will follow Department of Defense (DoD) Directive 5000.01 and DoD Instruction 5000.02 guidelines and directives, as applicable, to ensure management controls--commensurate with the scope and cost of the supported requirement.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 651120 / Pegasus Capability Improvements
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
KC-46A Capability Upgrades (to include modification and modernization)	SS/CPFF	The Boeing Company : Seattle, WA	0.000	12.033	Mar 2023	53.326	Mar 2023	38.264	Mar 2024	-		38.264	167.588	271.211	-
Subtotal			0.000	12.033		53.326		38.264		-		38.264	167.588	271.211	N/A

Remarks
Target value is TBD since Block I PACS and Block II has not awarded yet.

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Direct Mission Support	Various	KC-46 Program Office : Dayton, W-P AFB, OH	2.349	10.000	Jun 2022	0.067	Mar 2023	14.335	Feb 2024	-		14.335	2.732	29.483	-
Direct Cite Authority for Civilian Pay	RO	KC-46 Program Office : Dayton, W-P AFB, OH	0.756	2.173	Oct 2021	2.217	Oct 2022	2.261	Oct 2023	-		2.261	90.155	97.562	-
Subtotal			3.105	12.173		2.284		16.596		-		16.596	92.887	127.045	N/A

Remarks
Target value is blank for Direct Mission Support since there are various contracts. Target Value is blank for Direct Cite Authority for Civilian Pay since funds are provided to the center to fund manpower.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.105	24.206	55.610	54.860	-	54.860	260.475	398.256	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force			Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	Project (Number/Name) 651120 / <i>Pegasus Capability Improvements</i>	

	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>Pegasus Capability Improvements</i>																												
KC-46A Block I PACS																												
Long Term Test Aircraft Maintenance Support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	Project (Number/Name) 651120 / <i>Pegasus Capability Improvements</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Pegasus Capability Improvements</i>				
KC-46A Block I PACS	2	2023	4	2027
Long Term Test Aircraft Maintenance Support	4	2023	4	2027

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force										Date: March 2023		
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons				Project (Number/Name) 655271 / KC-46 RDT&E			
COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
655271: KC-46 RDT&E	5,818.237	29.939	121.919	69.802	0.000	69.802	22.646	3.738	0.000	0.000	0.000	6,066.281
Quantity of RDT&E Articles	4	-	-	-	-	-	-	-	-	-		

Note

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force	Date: March 2023
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Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	Project (Number/Name) 655271 / <i>KC-46 RDT&E</i>
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The Aircrew Training System (ATS) and Maintenance Training System (MTS) are being procured using KC-46A funding. The ATS contract was awarded on 1 May 2013 to Flight Safety Services Corporation, now known as Flight Safety International - Defense. The ATS contract will provide Aircrew Training Devices (ATDs), to include Weapon System Trainers (WSTs), Boom Operator Trainers (BOTs), Fuselage Trainers (FuTs), Part-Task Trainers (PTTs), and emerging technologies to meet validated Air Mobility Command (AMC) aircrew training requirements at each Main Operating Base (MOB) and the Formal Training Unit (FTU). The ATS contract will also support Distributed Mission Operations (DMO), provide aircrew instruction, develop courseware, provide logistics support, acquire a technical data package to support future competition efforts, and manage training device/courseware concurrency with the aircraft. The first eight ATS production options were exercised on 19 Aug 2015, 31 May 2017, 30 Apr 2018, 31 Mar 2019, 27 Feb 2020, 4 Mar 2021, 24 Feb 2022, and 15 Nov 2022.

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This requirement supports performance of a full financial audit as required by U.S.C. Title 10, Subtitle A, Part I, Chapter 9A, Sec 240-D, Financial Improvement and Audit Remediation (FIAR) Plan.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver KC-46A weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program elements 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, and 0606398F. In FY 2022 \$0.000 million was expended for civilian pay expenses in this program element, and in FY 2023 \$0.000 million is forecast for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023	FY 2024
<p>Title: KC-46A Aircraft Product Development</p> <p>Description: EMD activities will be conducted to include the following types of activities: develop a commercial 767-2C aircraft upon which the KC-46 is based; develop the KC-46A military capability and integrate it into the aircraft; build four EMD aircraft; procure live fire assets; procure required Government Furnished Equipment (GFE); procure simulator and maintenance data; develop technical manuals and Type 1 training; and conduct development and operational testing.</p> <p>FY 2023 Plans: Continue product refinement, studies, ground, and flight testing in support of the KC-46A weapon system to include receiver certifications, simulator data collection, and completion of IOT&E events/reporting. Incrementally fund boom telescope actuator redesign (BTAR) Engineering Change Proposal (ECP) efforts (ongoing since 2020) and support other government costs associated with solution for Remote Vision System (RVS). Study, analyze, test and update documentation in order to certify and increase KC-46A capability for aerial refueling (AR) onload. Award contract and begin work for Take Off and Landing Data (TOLD) to address deficiencies and improve capability.</p> <p>FY 2024 Plans:</p>	5.867	73.790	22.997

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023		
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 655271 / KC-46 RDT&E		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Continuation of product refinement, studies, ground, and flight testing in support of the KC-46A weapon system to include receiver certifications, simulator data collection, and completion of IOT&E events/reporting. Incrementally fund boom telescope actuator redesign (BTAR) Engineering Change Proposal (ECP) efforts (ongoing since 2020) and support other government costs associated with solution for Remote Vision System (RVS). Study, analyze, test and update documentation in order to certify and increase KC-46A capability for aerial refueling (AR) onload. Incrementally fund work for Take Off and Landing Data (TOLD) to address deficiencies and improve capability. FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased due to reduction in scope for BTAR and KC-46A EMD costs in FY 2024.				
Title: KC-46A Trainer Product Development - Aircrew Training System (ATS) Description: Trainer development activities will be conducted to include the following types of activities: development and procurements of ATDs, courseware, and associated support equipment. FY 2023 Plans: N/A FY 2024 Plans: eRVS, BTAR, NVG, LAIRCM, RVS 2.0, and TOLD Upgrade Development. FY 2023 to FY 2024 Increase/Decrease Statement: Funding increased due to development for new upgrades of eRVS, BTAR, RVS 2.0, TOLD, and other smaller efforts.		0.190	0.000	20.169
Title: KC-46A Test & Evaluation Description: Test & Evaluation (T&E) activities will be conducted to include the following types of activities: Development Test & Evaluation, Operational Test & Evaluation, Tanker Qualification, Receiver Certifications, Live Fire Test & Evaluation (LFT&E), Federal Aviation Administration (FAA) support, and other test planning and organizational support. FY 2023 Plans: Continue using EMD, pre-delivery production, and/or LRIP aircraft to support AR tanker-receiver certification testing, Aerial Refueling Simulator Qualifications data collection, correction of deficiencies, and other T&E activities. Continue Government Test for RVS and BTAR. FY 2024 Plans:		22.556	37.075	25.629

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 655271 / KC-46 RDT&E
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Continuation of EMD, pre-delivery production, and/or LRIP aircraft to support AR tanker-receiver certification testing, Aerial Refueling Simulator Qualifications data collection, correction of deficiencies, and other T&E activities for the KC-46A. Continue Government Test for RVS and BTAR. FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased due to reduced Test activities and gradual transition of test requirements to Pegasus Capability Improvements BPAC.			
Title: KC-46A Support Description: Development, integration, and demonstration of the KC-46A mission planning capability. In addition, studies and analysis to support planning activities for future efficiency initiatives, business case analyses, future tanker planning, and miscellaneous Program Office support and planning. Also includes requirements such as travel, office supplies, training courses, and service contracts. FY 2023 Plans: Continue Program Office Support and Planning and continue Future Tanker efforts. FY 2024 Plans: Continued Program Office Support and Planning. FY 2023 to FY 2024 Increase/Decrease Statement: Funding decreased due to transfer for future tanker efforts, PE 65164F, ARCM.	1.326	11.054	1.007
Accomplishments/Planned Programs Subtotals	29.939	121.919	69.802

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u> <u>Base</u>	<u>FY 2024</u> <u>OCO</u>	<u>FY 2024</u> <u>Total</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF 02 Line Item KC046A: KC-46A Tanker	2,289.015	2,458.717	2,882.590	-	2,882.590	2,843.554	2,835.248	1,548.227	0.000	0.000	14,857.351
• APAF 06 Line Item 000999: Initial Spares	154.207	100.938	195.184	-	195.184	251.280	255.597	150.383	-	0.000	1,107.589

Remarks

D. Acquisition Strategy
The KC-46A Program acquisition strategy is to procure an existing commercial, Federal Aviation Administration (FAA) certified aircraft modified to meet USAF requirements. The KC-46A program released a final RFP on 24 Feb 2010, and entered source selection on 9 Jul 2010. The KC-46A program held a Milestone B (MS

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	Project (Number/Name) 655271 / <i>KC-46 RDT&E</i>
<p>B) Defense Acquisition Board (DAB) on 23 Feb 2011, received approval to enter EMD from the Undersecretary of Defense (Acquisition, Technology and Logistics) (USD(AT&L)) on 24 Feb 2011, and awarded the KC-46A contract to Boeing on 24 Feb 2011 to develop and procure 179 KC-46A aircraft. The KC-46A contract procurement was conducted via a full and open competition per Federal Acquisition Regulation (FAR) Part 15, and resulted in a FY 2011 Engineering and Manufacturing Development (EMD) Fixed Price Incentive Firm (FPIF) contract. The EMD phase is developing, building, and testing four KC-46A aircraft, and will qualify the KC-46A as a tanker and certify pairings with receiver aircraft.</p> <p>The MS B acquisition strategy planned for two LRIP lots followed by 11 Full-Rate Production (FRP) lots for a total aircraft procurement of 175 production aircraft. An update to the acquisition strategy occurred in support of MS C that increased LRIP from two to four lots, with the total aircraft buy remaining at 175 production aircraft. A Dec 2017 USD(AT&L) Acquisition Decision Memorandum expanded LRIP to include Lot 5. Another Program Deviation Report was submitted on June 8, 2020, to declare a breach to the Full Rate Production Decision. A new APB dated October 19, 2020 was approved, and a new ADM dated October 20, 2020 re-designated Lots 6 through 9 as LRIP with the total aircraft buy remaining at 175 Production aircraft (+4 EMD aircraft for a grand total of 179 aircraft).</p> <p>LRIP now consists of two Firm Fixed Price (FFP) and seven FFP Not to Exceed (NTE) options (LRIP-1 Qty 7, LRIP-2 Qty 12, LRIP-3 Qty 15, LRIP-4 Qty 18, LRIP-5 Qty 15, LRIP-6 Qty 12, LRIP-7 Qty 15, LRIP-8 Qty 15, LRIP-9 Qty 15). This will be followed by four (Lots 10-13) FFP production options [via NTE values + Economic Price Adjustment (EPA)]. LRIP Lots 1 and 2 were awarded Aug 2016, LRIP Lot 3 was awarded Jan 2017, LRIP Lot 4 was awarded Sep 2018, LRIP Lot 5 was awarded Sep 2019, and LRIP Lots 6 and 7 were awarded Jan 2021. LRIP Lot 8 was awarded August 2022 and LRIP Lot 9 was awarded January 2023.</p> <p>The Aircrew Training System (ATS) acquisition strategy is to provide Aircrew Training Devices (ATDs), and associated support structure, to each Main Operating Base (MOB) and the Flying Training Unit (FTU). The ATS EMD FPIF contract with production options was conducted via a full and open competition per FAR Part 15, and awarded to FlightSafety Services Corporation in FY 2013. The ATS EMD phase will develop and procure ATDs; and will be supported with courseware, Training System Support Center, the technical data package, and support equipment to ensure system availability and concurrency with the aircraft. The first eight ATS production options were exercised on 19 Aug 2015, 31 May 2017, 30 Apr 2018, 31 Mar 2019, 2 Sep 2020, 4 Mar 2021, 23 May 2022, and 2 February 2023. Lot 9 of 10 total lots is planned to be awarded in January 2024.</p> <p>The Maintenance Training System (MTS) acquisition strategy is to acquire Maintenance Training Devices (MTDs), and associated support structure, for two AMC active duty Regional Maintenance Training Facilities. The MTS EMD FFP contract with production options was conducted via a full and open competition per FAR Part 15, and awarded to The Boeing Company in FY 2016. The MTS EMD phase will develop and procure MTDs; and will be supported with courseware, Training System Support Center, the technical data package, and support equipment to ensure system availability and concurrency with the aircraft.</p> <p>The KC-46A Program is responsible for the development, testing, and production of a drogue-equipped, wing-mounted refueling system to meet Capability Production Document (CPD) thresholds and objectives for simultaneous refueling of two probe-equipped receivers. The system can be installed or removed from the KC-46A as mission needs dictate.</p> <p>The long-term support concept for the KC-4A is organic two-level maintenance (2LM): organization level (O-level) and depot level (D-level). For the purposes of this program, all maintenance other than O-level shall be referred to as D-level. The product support strategy will initially employ Interim Contractor Support (ICS) before</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
3600 / 5	PE 0401221F / <i>KC-46A Tanker Squadrons</i>	655271 / <i>KC-46 RDT&E</i>

transitioning to a 100% organically-managed maintenance and supply support capability. Performance Based Logistics (PBL) solutions will be evaluated during EMD as viable approaches to facilitate the transition.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 655271 / KC-46 RDT&E
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
KC-46A aircraft non-recurring development, integration, and testing; 4 RDT&E tanker aircraft; and support	SS/FPIF	The Boeing Company : Seattle, WA	5,146.722	5.867	Jan 2023	70.576	Mar 2023	11.452	Dec 2023	-		11.452	17.064	5,251.681	-
KC-46A Take Off and Landing Data (TOLD) Development Capability	SS/TBD	The Boeing Company : Seattle, WA	0.000	0.000	Aug 2022	3.214	Jan 2024	11.546	Jul 2024	-		11.546	36.576	51.336	-
KC-46A Aircrew Training System	SS/FPIF	Flight Safety Services Co : Centennial, CO	133.267	0.190	Sep 2022	0.000	Dec 2023	20.169	Dec 2023	-		20.169	2.714	156.340	-
Subtotal			5,279.989	6.057		73.790		43.167		-		43.167	56.354	5,459.357	N/A

Remarks
 The KC-46A EMD contract was awarded 24 Feb 2011. The total cost represents the current Program Office Estimate (POE) which accounts for the ceiling price of the contract plus the financial and schedule risk of potential design changes for the KC-46A aircraft.

Target value is blank for the KC-46A aircraft category since the contract is fully funded. Target value is TBD for TOLD since it has not awarded yet. Target value is blank for the KC-46A Aircrew Training System category since the contract is fully funded.

FINANCIAL PERFORMANCE: The KC-46A is evaluated against traditional Research and Development (R&D) program expenditure benchmarks. Unlike many traditional R&D programs, the KC-46A EMD contract is a FPIF contract with progress payments. Twenty percent (20%) of incurred costs are withheld until the end of the contract, when they are liquidated. Mandatory funding obligations and progress payment withholds will cause the program to lag traditional expenditure benchmarks, painting an inaccurate portrait of overall program health.

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
KC-46A studies and analysis associated with the development, integration, and demonstration of KC-46 capability & future planning	C/CPAF	Various : Various	270.690	1.326	Jun 2022	11.054	Jun 2023	1.007	Jan 2024	-		1.007	0.000	284.077	-
Subtotal			270.690	1.326		11.054		1.007		-		1.007	0.000	284.077	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / KC-46A Tanker Squadrons	Project (Number/Name) 655271 / KC-46 RDT&E
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Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
These contracts are on an as needed basis, with various contract types and performing activities. Target value is blank since there are various contracts.

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
KC-46A testing and planning support of development & operational test, FAA & military certification, and aircraft qualification activities	MIPR	418th FLTS : Edwards AFB, CA	246.897	9.761	May 2022	25.871	Dec 2022	25.628	Dec 2023	-		25.628	8.327	316.484	-
KC-46A Long Term Test Aircraft Maintenance Support	SS/CPAF	The Boeing Company : Edwards AFB, CA	20.661	12.795	Sep 2022	11.204	Sep 2023	0.000	Sep 2024	-		0.000	0.000	44.660	46.636
Subtotal			267.558	22.556		37.075		25.628		-		25.628	8.327	361.144	N/A

Remarks
Integrated testing and planning activities are performed by government organizations, with some contractor technical subject matter experts and teaming with the prime contractor. Target value is blank for the KC-46A testing and planning support of development & operational test because this is funding provided to government agencies.

	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5,818.237	29.939	121.919	69.802	-	69.802	64.681	6,104.578	N/A

Remarks
In FY2021, PE 0605221F KC-46A, Project 655271 KC-46A RDT&E, and Project 651120 Pegasus Capability Improvements efforts were transferred to PE 401221F, Project 655271 KC-46A RDT&E, and Project 651120 Pegasus Capability Improvements in order to consolidate all KC-46 activity under a single PE. PE 0401221F also has historical Tanker Replacement costs from FY 2005-2008 reflected in prior years. PE 0605221F has costs from FY2009 to FY2020.

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0401221F / <i>KC-46A Tanker Squadrons</i>	Project (Number/Name) 655271 / <i>KC-46 RDT&E</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
KC-46A				
Initial Operational Test & Evaluation (for WARPs)	2	2022	2	2023
Government Testing for Correction of Deficiencies	1	2022	1	2026
Boom Telescope Actuator Redesign ECP	4	2022	2	2025
Aircrew Training System Development & Updates	1	2022	4	2025
Take Off and Landing Data (TOLD)	3	2023	2	2027
Long Term Test Aircraft Maintenance Support (LTTAMS)	4	2022	4	2024

Note
Events prior to Q1 2021 are reflected in PE 0605221F. Funding moved to PE 0401221F in FY 2021.